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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,477

05/08/2006

Shinichi Kohda

KAW 131NP

5145

23995

7590

12/28/2007

RABIN & Berdo, PC
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WASHINGTON, DC 20005

EXAMINER

GREEN, TELLY D

ART UNIT

PAPER NUMBER

2822

MAIL DATE

DELIVERY MODE

12/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/578,477

Applicant(s)

KOHDA, SHINICHI

Examiner

Telly D. Green

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 08 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/8/2006 and 9/28/2007.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1, 2, 4, 5, and 6** rejected under 35 U.S.C. 102 (b) as being anticipated by Ota et al. (**EP 1014520 A1**).

In regards to claims 1 and 5, Ota et al. discloses forming a semiconductor lamination portion including an active layer (**item 106**) on a substrate (**item 101**), the semiconductor lamination portion (**items 103-109**) being made of the material having a cleavage plane not parallel to a cleavage plane of the substrate, forming a metal layer portion by melting a part of the semiconductor lamination portion; and forming resonance cavity end faces by cleaving the semiconductor lamination portion at the metal layer portion (**Abstract, paragraphs 33-42, 49-53, Figs. 3, 4 and 10**).

In regards to claims 2 and 6, Ota et al. discloses forming the metal layer (**item 102**) portion is performed by irradiating a laser beam from a back surface of the substrate opposite to a surface laminated with the semiconductor lamination portion, and thereby melting a part of the semiconductor lamination portion (**paragraphs 33-42, 49-53, Figs. 3, 4 and 10**).

In regards to claims 4, Ota et al. discloses the metal layer (**item 102**) portion is formed on a part of the semiconductor lamination portion contacted with the substrate (**Figs. 4 and 10**).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **3 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (EP 1014520 A1).

In regards to claims **3 and 7**, Ota et al. does not specifically disclose the metal layer portion is formed so as to have a width which is wider than that of a stripe-shaped portion for emitting and narrower than that of a semiconductor chip or a wavelength of the laser beam is set longer than a wavelength corresponding to a band gap of the active layer and shorter than a wavelength corresponding to a band gap of a semiconductor layer to be melted. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a metal layer portion formed so as to have a width which is wider than that of a stripe-shaped portion for emitting and narrower than that of a semiconductor chip and a wavelength of the laser beam set longer than a wavelength corresponding to a band gap of the active layer and shorter than a wavelength corresponding to a band gap of a semiconductor layer to be melted, since it has been held that discovering an optimum value of a result effective variable **involves** only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Doing so would provide the desired design and performance of the device.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited for disclosing related

limitations of the applicant's claimed and disclosed invention.

Domen et al. (US Patent 6,555,403 B1)

Kidoguchi et al. (US Patent 6,720,586 B1)

Hayashi et al. (US Patent 6,872,982 B2)

Takahashi et al. (US Patent 7,067,846 B2)

Takahashi et al. (US Patent Application 2006/0261352 A1)

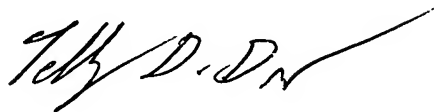
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Telly D. Green whose telephone number is 571-270-3204. The examiner can normally be reached on Monday thru Friday 7:30 AM - 5:00 PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

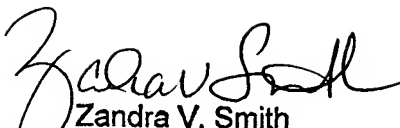
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number:
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Telly D. Green
December 20, 2007



Zandra V. Smith
Supervisory Patent Examiner
21 Dec 2007